

**COMMONWEALTH OF PENNSYLVANIA**  
**Department of Environmental Protection**  
**Title V Facility**

**SUBJECT:** Title V Facility Plan Approval Review Memo  
B Braun Medical, Inc.  
Hanover Twp., Lehigh County  
Application No. 39-00055A  
APS ID:976060, Auth Id: 1242955

**To:** Mark J Wejksznar, PE  
Program Manager  
Air Quality Program

**From:** Shailesh Patel, PE  
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**Through:** Raymond Kempa, PE  
Environmental Group Manager  
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On August 3, 2018, the Department received a plan approval application for the expansion of surgical and medical instrument apparatus manufacturing operations at the facility located in Hanover Township, Lehigh County.

**Administrative/Notifications**

Application Received:	August 3, 2018,
GIF:	Submitted with this application.
Compliance History:	Submitted with this application
Site Location:	901 Marcon Blvd., Allentown, PA 18109
Application Fee:	\$1700 received with application.
Municipal Notification:	Submitted with the application.
Acceptance Letter	Sent on September 5, 2018
Application Received	Published in PA bulletin on September 22, 2018

**General Information**

B. Braun manufactures various surgical and medical equipment at the Allentown Facility. By this application the company has proposed to increase manufacturing operations at the facility. The company will construct a new building at the current site that will include various operations such as Extrusion Operations, Injection Molding (IM) Operations, Mold Shop Operations, ancillary equipment, and emergency equipment.

The company's proposal consists of following:

- a. Installation of additional nine (9) extrusion lines
- b. Installation of additional forty (40) Injection Molding Machines

- c. Install and operate a small Mold Shop
- d. Installation of a fire pump
- e. Installation of an emergency generator (EGen)
- f. Installation of two (2) boilers
- g. Installation of three (3) cooling towers
- h. Insignificant combustion sources

## **Source Information**

### **Extrusion Operations**

During the Extrusion Operations process, pelletized resins from varying locations (i.e., silos, gaylords, bags, etc.) are transferred through a series of pressurized hoses to the extrusion lines. Once the resins are transferred from storage to the extrusion lines they are funneled into a barrel with a diameter that tapers with length. The screw within the barrel presses the pelletized resins against the barrel wall creating a shear force that heats the resins into a malleable material. The malleable plastic material is directed from the barrel into a die cast and mandrel to form the hollow cylindrical shape of an IV tube. Once shaped, the IV tube opacity or "frosting" is altered by applying varying amounts of forced cold-air to the IV tube. Following the IV tube frosting, the IV tube is cooled via a water bath and dried. Depending upon the end use of the IV tube, the IV tubes are either wound into a coil for delivery or cut into the desired lengths.

Presently the company manufactures intravenous (IV) tubing using nine existing extrusion lines. As part of the expansion the company has proposed to install and operate additional extrusion lines equal to the current capacity. The proposed Extrusion Operations are insignificant sources of emissions at the Facility [i.e., potential emissions are less than one ton of volatile organic compounds (VOC)].

### **Injection Molding (IM) Operations**

During the injection molding process, plastic medical parts are produced by heating various resins and injecting the molten resins into molds via a "screw". Prior to switching to a new mold or utilizing a different resin within an IM machine, the system is purged (i.e., cleaned) with a coarse resin to remove any remaining resin from the IM machine. In addition to the typical purge events, the screw of each injection molding machine is removed periodically for cleaning and maintenance. Only during the IM machine purges and periodic screw cleanings, emissions are vented to the atmosphere. At all other times, the process is a closed system that does not exhaust to the atmosphere. Company manufactures various plastic medical parts using 100 existing IM machines at the Facility. As part of the Expansion Project, the company has proposed to install and operate 40 new IM machines.

During typical operation, IM emissions are not vented to atmosphere. Emissions are vented to atmosphere only during IM machine purges and screw cleanings. The company has evaluated the PTE of VOC to the atmosphere during a purge event based on the VOC content of each material utilized within IM Operations. The company has conservatively assumed the maximum number of purges per day (i.e., six purges per day) and the maximum amount of resin utilized during each purge event (i.e., 10 pounds per purge) was vented to atmosphere. The resin with the highest VOC content was utilized for all emissions calculations in order to define the highest potential VOC emissions for this operation. The company has also conservatively assumed that the purge resin is utilized to clean the injection molding machine during every purge event. The proposed IM Operations are insignificant sources of emissions [i.e., potential emissions are less than one ton of VOC]

Following are the potential emissions from IM Operations.

Material	VOC content % weight	Maximum Purge/day	Worst case Purge amount Lb/purge	Potential VOC emissions
Material 4	0.25	6	10	0.03
Material 5	0.026	6	10	0.0028
Total PTE				0.03

Potential emissions are based on following.

Annual Operation 8,760 hours/yr

Material 4 with highest % VOC content assume all material purged and vented to atmosphere.

### Mold Shop Operations

The company will construct a small Mold Shop as part of the Expansion Project. Mold Shop Operations will include medical device mold maintenance, repair, and storage. In addition, the Mold Shop will also contain an electric water evaporator which is not a source of emissions. Repair operations in the Mold Shop may include metal grinding operations. Grinding related particulate emissions will be captured and controlled via a fabric filter dust collector. Pre-control particulate loading from the Mold Shop Operations will be below 0.04 gr/dscf. The proposed Mold Shop Operations are an insignificant source of emission & are exempt from permitting requirements.

### Fire Pump

The company will install a fire pump at the new manufacturing building as part of the Expansion Project. The fire pump will be a 282-brake horsepower (bhp) Clarke Model JU6HUFADNG fire pump powered by a John Deere 6068 Series Power Tech E (or equivalent) diesel fired compression ignition (CI) reciprocating internal combustion engine (RICE). The engine will burn ultra-low sulfur diesel fuel and will operate for emergency purposes (or maintenance and testing) only, and for no longer than 500 hours per year on a 12-month rolling basis. A 359-gallon diesel fuel tank will be installed to support the proposed fire pump.

Following are the potential emissions from the Fire Pump.

Pollutant	Emissions Factors			Potential Emissions TPY
	Value	Unit	Source	
NO <sub>x</sub>	0.00613	Lb/hp-hr	Subpart JJJJ	0.43
CO	0.00668	Lb/hp-hr	Subpart JJJJ	0.47
SO <sub>2</sub>	0.00205	Lb/hp-hr	AP-42	0.14
VOC	0.00048	Lb/hp-hr	Subpart JJJJ	0.03
PM	0.00033	Lb/hp-hr	AP-42	0.02
PM <sub>2.5</sub>	0.00033	Lb/hp-hr	AP-42	0.02
PM <sub>10</sub>	0.00033	Lb/hp-hr	AP-42	0.02
CO <sub>2e</sub>	-	-	40 CFR 98	80.74
Single HAP	0.00118	Lb/MMBtu	AP-42	0.00058
Total HAP	0.00379	Lb/MMBtu	AP-42	0.00187

Potential emissions are based on following

Fire Pump rating 282 hp, 1.97 MMBtu/hr

Annual Operations 500 hr/yr

### Emergency Generator

The company will install an emergency generator (EGen) at the new manufacturing building as part of the Expansion Project. The 750-kilowatt (kW) Cummins EGen will be powered by a Cummins Model GTA50 (or equivalent) spark ignition (SI) RICE. The engine has been certified as compliant with emissions standards codified at 40 CFR Part 60, Subpart JJJJ. The engine will burn natural gas and will operate for emergency purposes (or maintenance and testing) only, and for no longer than 500 hours per year on a 12-month rolling basis.

Following are the potential emissions from the EGen set.

Pollutant	Emissions Factors			Potential Emissions TPY
	Value	Unit	Source	
NO <sub>x</sub>	2.0	g/hp-hr	Subpart JJJJ	1.11
CO	4.0	g/hp-hr	Subpart JJJJ	2.22
SO <sub>2</sub>	0.00058	Lb/MMBtu	AP-42	0.00103
VOC	1.0	g/hp-hr	Subpart JJJJ	0.55
PM	0.04	Lb/MMBtu	AP-42	0.07
PM <sub>2.5</sub>	0.05	Lb/MMBtu	AP-42	0.08
PM <sub>10</sub>	0.05	Lb/MMBtu	AP-42	0.08
CO <sub>2e</sub>	-	-	40 CFR 98	206
Single HAP	0.06	Lb/MMBtu	AP-42	0.10
Total HAP	0.08	Lb/MMBtu	AP-42	0.14

Potential emissions are based on following

EGen rating                750 kW, 7.00 MMBtu/hr  
Annual Operations    500 hr/yr

### Boilers

The company will install two 21.0 million British thermal units per hour (MMBtu/hr) Bryan Boilers Model RW2100-W (or equivalent) natural gas-fired water boilers as part of the Expansion Project. Typical Facility operations will only require the use of one boiler, with the second boiler being used in times of peak load or as a backup to the first boiler.

Both boilers will be equipped with a Bryan Boilers manufactured (or equivalent) low NO<sub>x</sub> design burner capable of firing natural gas only as a fuel.

Gases from each boiler will be exhausted through a 28 inches diameter stack with no emission control. The exhaust gas temperature will be 300 °F. The boiler will be equipped with a fuel meter/recorder.

New source performance standards (NSPS) subpart Dc and Chapter 123 regulations are applicable to this size of boiler.

Following are the potential emissions from the boilers.

Pollutant	Emissions Factors			Potential Emissions (from 2 Boilers) TPY
	Value	Unit	Source	
NO <sub>x</sub>	50	Lb/MMscf	AP-42	9.02
CO	84	Lb/MMscf	AP-42	15.15
SO <sub>2</sub>	0.6	Lb/MMscf	AP-42	0.11

<b>VOC</b>	5.5	Lb/MMscf	AP-42	0.99
<b>PM</b>	1.9	Lb/MMscf	AP-42	0.34
<b>PM<sub>2.5</sub></b>	7.6	Lb/MMscf	AP-42	1.37
<b>PM<sub>10</sub></b>	7.6	Lb/MMscf	AP-42	1.37
<b>CO<sub>2e</sub></b>	-	-	40 CFR 98	21,541
<b>Single HAP</b>	1.8	Lb/MMscf	AP-42	0.32
<b>Total HAP</b>	1.89	Lb/MMscf	AP-42	0.34

Potential emissions are based on following

Each Boiler rating           21.0 MMBtu/hr, 1,020 Btu/scf for natural gas  
Annual Operations           8,760 hr/yr

### Cooling Towers:

The company will install three 2,849 gallons per minute (GPM) cooling towers at the new manufacturing building as part of the Expansion Project. The third unit will be reserved for redundancy and will not be operational at the same time as the first and second units. The proposed cooling towers will be equipped with water-side economizers and will be operational throughout the year. All cooling towers will be designed with 0.005 % drift loss.

Following are the potential emissions form cooling towers.

Pollutant	Emissions rate		
	Lb/hr	Source	Tons/yr
<b>PM</b>	0.26	AP-42	1.14
<b>PM<sub>2.5</sub></b>	0.26	AP-42	1.14
<b>PM<sub>10</sub></b>	0.26	Ap-42	1.14

Emissions estimates are based on following.

Total circulating waters- 5,698 gpm

Drift loss- 0.005 %

TDS- 380.5 mg/liter

Hours of Operation-8,760 hr/yr

### Insignificant combustion sources

Various small natural gas-fired humidifiers and hot water heaters will be installed at the new manufacturing building as part of the Expansion Project. Seventeen humidifiers will be installed, each with an average heat input of 0.2 MMBtu/hr. Company anticipates operating the humidifiers during the winter months for product quality requirements. Three 0.6 MMBtu/hr and one 0.3 MMBtu/hr hot water heaters are also proposed as part of the Expansion Project, as well as two 0.83 MMBtu/hr dryers. Each small combustion unit is rated at less than 2.5 MMBtu/hr and is therefore exempt from Plan Approval requirements.

Following are the potential emissions form minor combustion sources.

Pollutant	Emissions Factors			Potential Emissions (from all minor sources) TPY
	Value	Unit	Source	
<b>NO<sub>x</sub></b>	100	Lb/MMscf	AP-42	3.07
<b>CO</b>	84	Lb/MMscf	AP-42	2.58
<b>SO<sub>2</sub></b>	0.6	Lb/MMscf	AP-42	0.02

<b>VOC</b>	5.5	Lb/MMscf	AP-42	0.17
<b>PM</b>	1.9	Lb/MMscf	AP-42	0.06
<b>PM<sub>2.5</sub></b>	7.6	Lb/MMscf	AP-42	0.23
<b>PM<sub>10</sub></b>	7.6	Lb/MMscf	AP-42	0.23
<b>CO<sub>2</sub>e</b>	-	-	40 CFR 98	3,668
<b>Single HAP</b>	1.8	Lb/MMscf	AP-42	0.06
<b>Total HAP</b>	1.89	Lb/MMscf	AP-42	0.06

Potential emissions are based on following

Humidifier rating	0.2 MMBtu/hr, 17 units
Hot water heater rating	0.6 MMBtu/hr, 3 units
Hot water heater rating	0.3 MMBtu/hr, 1 unit
Extrusion Dehumidifier	0.83 MMBtu/hr, 2 units
Annual Operations	8,760 hr/yr

#### Atmospheric emissions:

Based on 8,760 hours of operation, using worst case scenario following potential emissions are expected from the proposed expansion.

<b>Pollutant</b>	<b>Tons/yr</b>
NO <sub>x</sub>	13.63
CO	20.42
SO <sub>2</sub>	0.27
VOC	1.78
PM	1.63
PM <sub>2.5</sub>	2.85
PM <sub>10</sub>	2.85
CO <sub>2</sub> e	25,496
Single HAP	0.34

#### Regulatory Analysis:

The applicable federal & state rules apply to the operations are listed below:

#### Federal Regulations:

Potentially applicable Federal regulations to proposed expansion are listed below.

- Standards of Performance for New Stationary Sources (NSPS)
- National Emission Standards for Hazardous Air Pollutants (NESHAP)
- New Source Review (NSR)

#### Standards of Performance for New Stationary Sources

U.S. EPA has promulgated standards of performance for new, modified, or reconstructed sources of air pollution at 40 CFR Part 60, also referred to as NSPS. Following are potentially applicable NSPS.

**40 CFR Part 60, Subpart Dc-** Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units. Each proposed boiler have a capacity of 21.0 MMBtu/hr and commenced construction after June 9, 1989, and thus are subject to 40 CFR Part 60, Subpart Dc.

40 CFR Part 60, Subpart Dc establishes emissions standards for SO<sub>2</sub> and PM for coal-fired boilers. The proposed boilers at the Facility will fire only natural gas and thus are not subject to emissions standards in 40 CFR Part 60, Subpart Dc. In accordance with 40 CFR 60.48c(a) and 40 CFR 60.7, the permittee

must submit initial notifications of construction and actual startup to U.S. EPA and PADEP. Additionally, the permittee must comply with the recordkeeping and reporting requirements of 40 CFR 60.48c(g) and (i). The company will comply with these requirements.

**40 CFR Part 60, Subpart Kb**

40 CFR Part 60, Subpart Kb applies to the storage of volatile organic liquids (VOLs) in vessels with a capacity greater than or equal to 19,813 gallons that were constructed after July 23, 1984. The proposed diesel fuel storage tank will have a capacity of 359 gallons and thus is not subject to 40 CFR Part 60, Subpart Kb.

**40 CFR Part 60, Subpart IIII-Standard of Performance for Stationary Compression Ignition Internal Combustion Engines** applies to manufacturers, owners, and operators of CI ICE.

Applicability to 40 CFR Part 60, Subpart IIII is established in 40 CFR part 60.4200 wherein owners and operators are deemed affected if construction of the CI ICE commenced after July 11, 2005 and the CI ICE was manufactured after April 1, 2006 and is not a fire pump engine, or is manufactured as a certified Nation Fire Protection Association (NFPA) fire pump engine after July 1, 2006. The proposed fire pump engine was constructed after July 1, 2006 and is a certified NFPA fire pump engine. Therefore, the proposed fire pump engine is subject to the requirements of 40 CFR Part 60, Subpart IIII.

In accordance with 40 CFR Part 60.4205(c), owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emissions standards in Table 4 of 40 CFR Part 60, subpart IIII. The proposed fire pump engine will comply with the applicable emissions standards.

40 CFR Part 60.4207, requires the fire pump engine to fire diesel fuel that meets the requirements of 40 CFR Part 80.510(b).

40 CFR Part 60.4209(a) requires the fire pump to be equipped with a non-resettable hour meter.

40 CFR Part 60.4211 (a) requires the owners and operators to comply with emissions standards specified in 40 CFR Part 60, Subpart IIII. The company will comply with these applicable standards.

40 CFR Part 60.4211(f), requires the company to limit maintenance checks and readiness tests of the fire pump engine to less than 100 hours per year, and must limit non-emergency operations to 50 hours per year of the 100 hours per year.

40 CFR Part 60.4214(b) requires the company to keep records of the operation of the fire pump engine in emergency and nonemergency services that are recorded through the non-resettable hour meter. The company will comply with these requirements.

**40 CFR Part 60, Subpart JJJJ — Standard of Performance for Stationary Spark Ignition Internal Combustion Engines** applies to manufacturers, owners, and operators of SI ICE. Applicability to 40 CFR Part 60, Subpart JJJJ is established in 40 CFR, Part 60.4230. The proposed BGen engine at the Facility is subject to 40 CFR Part 60, Subpart JJJJ, because the 750 kW (1,005 hp) SI ICE commenced construction after June 12, 2006 and the stationary SI ICE was manufactured on or after January 1, 2008.

40 CFR Part 60.4233(e) requires the company to comply with the emissions standards in Table I of 40 CFR Part 60, Subpart JJJJ for the entire life of the engine pursuant to 40 CFR 60.4234.

40 CFR Part 60.4237 requires the EGen engine to be equipped with a non-resettable hour meter.

40 CFR Part 60.4243 requires the owners and operators to comply with the emissions standards specified in 40 CFR Part 60.4233(e) & must purchase an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ and demonstrate compliance by operating and maintaining the stationary SI ICE according to the manufacturer's emission-related written instructions. The proposed EGen engine is certified compliant with 40 CFR Part 60, Subpart JJJJ emissions standards and the company will operate and maintain the EGen engine according to the manufacturer's instructions.

40 CFR Part 60.4243(d) requires the company to limit maintenance checks and readiness tests of the EGen engine to less than 100 hours per year, and must limit non-emergency operation to 50 hours per year of the 100 hours per year.

40 CFR Part 60.4245(a) requires the company to keep records of all notifications submitted to comply with 40 CFR Part 60, Subpart JJJJ, documentation supporting any notification, maintenance conducted on the engine, and documentation from the manufacturer that the engine is certified to meet the applicable emission standards.

40 CFR Part 60.4245(b) requires the company to keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The company will comply with these requirements

#### **National Emission Standards for Hazardous Air Pollutants**

U.S. EPA has promulgated NESHAPs at 40 CFR Parts 61 and 63. There are no 40 CFR Part 61 NESHAP requirements that apply to the proposed project.

Facility is an area source of HAP. Following are potentially applicable NESHAPs to the proposed project.

**40 CFR Part 63, Subpart Q** - NESHAP for Industrial Process Cooling Towers applies to industrial process cooling towers that are operated with chromium-based water treatment chemicals and are located at a major source of HAP. The proposed cooling towers will not be operated with chromium based water treatment chemicals and will be located at an area source of HAP. Therefore, the proposed cooling towers are not subject to 40 CFR Part 63, Subpart Q.

**40 CFR Part 63, Subpart ZZZZ** — NESHAP for Stationary RICE applies to stationary RICE located at major and area sources of HAP. The proposed fire pump and EGen engines are classified as new stationary RICE as they will be located at an area source of HAP emissions and construction of the engines commenced on or after June 12, 2006. However, pursuant to 40 CFR the engines meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting Part 60, subpart JJJJ.

**40 CFR Part 63, Subpart JJJJJJ** — NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources applies to owners and operators of industrial, commercial, and institutional boilers that are located at area sources of HAP. Pursuant to 40 CFR 40 CFR Part 63, Subpart JJJJJJ does not apply to natural gas-fired boilers; therefore, the boilers are not subject to 40 CFR Part 63, Subpart JJJJJJ.

#### **New Source Review**

The facility is located in Lehigh County which is classified as in attainment or unclassifiable for all regulated NSR pollutants with respect to the National Ambient Air Quality Standards (NAAQS). However, Lehigh County is managed as a moderate ozone nonattainment area with regard to NNSR applicability by virtue of its inclusion in the Northeast Ozone Transport Region (OTR). As a result, the Facility evaluated the applicability of both the NNSR regulations and PSD regulations.

#### **Prevention of Significant Deterioration**

The Facility is not a major stationary source, nor does the proposed Expansion Project alone meet the definition of a major stationary source with respect to the Federal PSD rules. Potential emissions of



each regulated NSR pollutant is less than 250 tpy, therefore, the PSD regulations do not apply to the Facility.

### **Pennsylvania Regulations:**

The proposed project is potentially subject to the following Commonwealth of Pennsylvania air quality regulations which are codified in Title 25.

### **Chapter 123 — Standards for Contaminants**

#### **Particulate Matter Emissions**

Standards for PM emissions are addressed in 25 Pa. Code, section 123.11 through 123.13. The proposed boilers are subject to 25 Pa. Code section 123.11 — Combustion units requirements. Per 25 Pa. Code section 123.11(a)(1), PM from the boilers may not exceed 0.4 lb/MMBtu. The boilers will comply with this requirement.

The fire pump, EGen, and cooling towers are considered process sources and are therefore subject to the 25 Pa. Code section 123.13 — Processes requirements. Per 25 Pa. Code section 123.13 (c)(1)(i), PM from the fire pump, EGen, and cooling towers may not exceed 0.04 grains per dry standard cubic foot (gr/dscf). The fire pump, EGen, and cooling towers will comply with this requirement.

#### **Sulfur Compound Emissions**

Standards for sulfur compound emissions are addressed in 25 Pa. Code, section 123.21 through 123.25. The fire pump and EGen are considered process sources and are therefore regulated by the 25 Pa. Code y 123.21 — General sulfur requirements. In accordance with 25 Pa. Code, Section 123.21, sulfur oxides [expressed as sulfur dioxide (SO<sub>2</sub>)] from the fire pump and EGen may not exceed 500 PPM by volume, dry basis (ppmvd). Use of diesel fuel with a sulfur content of 0.0015% (by weight) or less in the fire pump ensures compliance with this requirement. The use of natural gas, which has a negligible sulfur content, in the EGen ensures compliance with this requirement.

The proposed boilers are subject to 25 Pa. Code, section 123.22 - combustion units sulfur requirements. In accordance with 25 Pa. Code, section 123.22 (c)(1) for the Allentown air basin, the boilers may not emit sulfur oxides (expressed as SO<sub>2</sub>) in excess of 3 lb/MMBtu over a 1-hour period. The use of natural gas, which has a negligible sulfur content, in the boilers ensures compliance with this requirement.

#### **Visible Emissions**

25 Pa. Code, section 123.41 prohibits visible emissions in excess of 20% for a period or periods aggregating more than three minutes in any one hour and in excess of 60% at any time. The Facility will comply with this requirement, except as exempted pursuant to 25 Pa. Code, section 123.42.

#### **Odor emissions**

**Chapter 123.31** requires no odor off the plant property.

### **Chapter 127, BAT Requirements**

Best Available Technology (BAT) analysis required by Section 127.12 for the proposed new sources:

#### **BAT for the Boilers**

The company has proposed to install two 21.0 MMBtu/hr natural gas-fired boilers with low nitrogen oxide (NO<sub>x</sub>) burners. Low-NO<sub>x</sub> burners are typically the only add-on control technology available for this size boiler. The boilers will be equipped with low-NO<sub>x</sub> burners which will meet 0.049 lbs NO<sub>x</sub> per MMBtu. The boilers will be operated in accordance with the manufacturer's operating procedures and maintained as specified by the manufacturer including periodic boiler tune-ups. Therefore, low NO<sub>x</sub> burners and good operating practices represents BAT for these boilers.

#### **BAT for the Cooling Towers**

The company has proposed to install three 2,849 GPM cooling towers with an estimated drift loss of

0.005%. This drift loss will minimize PM emissions from PM released during the evaporation of water droplets which contain dissolved solids in the cooling water. Thus, the drift loss of 0.005% represents BAT for the cooling towers. The cooling towers will be operated in accordance with the manufacturer's specified operating procedures and maintained as specified by the manufacturer. Maintenance will include periodic cleaning of the tower and the tower drift eliminator cells. Good operating practices also represents BAT for the cooling towers.

#### **BAT for the Fire Pump**

The company has proposed to operate the fire pump engine in compliance with the applicable Federal and State regulations and operating the engine in accordance with the manufacturer's specifications and good operating practices for minimizing emissions, which represents BAT for the fire pump.

#### **BAT for the EGen**

The company has proposed to operate the EGen engine in compliance with the applicable Federal and State regulations and operating the engine in accordance with the manufacturer's specifications and good operating practices for minimizing emissions, which represents BAT for the EGen.

#### **Subchapter E — Nonattainment New Source Review**

The Facility is located in Lehigh County which is classified as in attainment or unclassifiable for all regulated NSR pollutants with respect to the NAAQS. However, Lehigh County is managed as a moderate ozone nonattainment area with regard to NNSR applicability by virtue of its inclusion in the OTR pursuant to 25 Pa. Code 127.201 (c).

The Facility is not currently classified as a "major" NO<sub>x</sub> and VOC source under the NNSR permitting requirements because current facility-wide potential NO<sub>x</sub> emissions do not exceed 100 tpy and facility-wide potential VOC emissions do not exceed 50 tpy. The Facility's status as a minor source with respect to NNSR requirements will not change as a result of the Expansion Project.

#### **25 Pa. Code 129.57**

25 Pa. Code 129.57 applies to storage tanks greater than or equal to 2,000 gallons storing VOC with a vapor pressure greater than 1.5 psia. The proposed diesel fuel storage tank will have a capacity of 359 gallons and is therefore not subject to 25 Pa. Code 129.57.

#### **Compliance and Monitoring:**

Use of AP- 42 emission factor calculations assures compliance with particulate emission from cooling towers and boilers.

The company will demonstrate compliance with the NO<sub>x</sub> and CO emission limitations through a stack test on boilers and will assure the compliance with the BAT requirements for NO<sub>x</sub> and CO emission rates. The company will operate the sources with good engineering practices to show compliance with the emission rate and Department's regulations.

#### **Recommendations**

It is recommended that the plan approval be issued with special conditions.

1. The facility shall maintain records of fuel consumption along with hours of operation for the boilers, fire pump and Egen Set.
2. The visible emission opacity shall not be equal to or greater than 20 % for a period or period aggregating more than 3 minutes in any 1-hour or equal to or greater than 60 % at any time.